

Instant Internet Evaluation Board II-EVB-630W

User Manual

Version 1.2



Connect One Ltd.
20 Atir Yeda Street
Kfar Saba 44643, Israel
Tel: +972-9-766-0456
Fax: +972-9-766-0461
E-mail: sales@connectone.com
<http://www.connectone.com>

Program License Agreement

The information in this document is subject to change without notice and shall not be construed as a commitment on the part of Connect One.

Connect One assumes no liability for any errors that may appear in this document.

The software described in this document is furnished under a license agreement and may be used or copied only in accordance with the terms of such a license agreement. It is forbidden by law to copy the software on any medium except as specifically allowed in the license agreement. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, including but not limited to photocopying, recording, transmitting via fax and/or modem devices, scanning, and/or information storage and retrieval systems for any purpose without the express written consent of Connect One.

iChip, AT+i and Connect One are trademarks of Connect One Ltd.

Copyright © 2000–2012 Connect One Ltd. All rights reserved.

About This Guide

The purpose of this User Manual is to familiarize prospective customers with the functionality of Connect One's II-EVB-630W using the iChipConfig Utility and AT+i™ commands.

This manual contains the following sections:

Product Overview: Explains the iChip™ CO2128SEC as the heart of the II-EVB-630W. It describes the product uses and features and provides guidance for using this manual.

Getting Started: Describes the II-EVB-630W package contents, unpacking and installation instructions, and diagrams.

Firmware and Parameters Update: This section explains how to perform firmware and parameters update.

Warranty Statement

Connect One warrants to the Customer that the Products to be delivered hereunder will function in accordance with the specifications published with regard thereto by Connect One, under conditions of normal use and service and when used in accordance with Connect One's instructions, for a period of 12 (twelve) months from shipment by Connect One or its distributor to the customer. Connect One will, at its option, repair or replace Products that fail to perform as aforesaid. The Customer shall ship defective Products to be repaired or replaced to Connect One under warranty at Connect One's expense, and Connect One shall, at its expense, ship the repaired Products or its replacement to the Customer.

In no event will Connect One's liability under the foregoing warranty exceed the purchase price of the defective Products.

The warranty set forth above shall not apply (i) with respect to defects or damage caused by the use of unauthorized parts, the making of unauthorized repairs or improper use or maintenance, (ii) if service or repairs of the allegedly defective Products have been performed by persons other than qualified persons who have been properly trained to perform the same, (iii) if the allegedly defective Products have been affected by alterations, modifications or other tampering or misuse, (iv) if the allegedly defective Products have been removed from their original packaging prior to sale to the end-user or (v) if the allegedly defective Products have been used otherwise than in accordance with Connect One's instructions.

The provisions of the above sections set forth the Customer's sole and exclusive remedies with regard to Product failure. CONNECT ONE MAKES NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, WITH RESPECT TO THE PRODUCTS, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT OF PATENT OR OTHER INTELLECTUAL PROPERTY RIGHTS. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE PRODUCTS ARISING FROM ANY COURSE OF DEALING, USAGE OR TRADE OR OTHERWISE. IN NO EVENT SHALL CONNECT ONE BE LIABLE FOR INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES WHETHER UNDER THIS AGREEMENT, IN TORT OR OTHERWISE, OR FOR AN AMOUNT IN EXCESS OF THE ACTUAL AMOUNT PAID BY THE CUSTOMER TO CONNECT ONE FOR THE FAILED PRODUCTS.

Revision History

23-3750-11

Version	Date	Description
1.0	December 2007	Initial preliminary version
1.1	May 2009	
1.2	April 2012	Updated product pictures, screen captures and components lists.

TABLE OF CONTENTS

PROGRAM LICENSE AGREEMENT	II
ABOUT THIS GUIDE.....	III
WARRANTY STATEMENT.....	IV
1 PRODUCT OVERVIEW	7
1.1 iCHIP CO2128SEC — THE II-EVB-630W INTERNET ENGINE	7
1.2 HOW TO USE THIS MANUAL	7
2 GETTING STARTED.....	9
2.1 WHAT'S IN THE PACKAGE?	9
2.2 ADDITIONAL DOCUMENTATION	9
2.3 UNPACKING AND INSTALLING	10
2.4 CONNECTORS AND SWITCH POSITIONS.....	12
2.4.1 Connectors.....	12
2.4.2 Switches.....	12
2.5 LED POSITIONS.....	12
2.6 JUMPER SETTINGS	13
2.7 BILL OF MATERIALS	14
2.7.1 II-EVB-2128-PLC Motherboard.....	14
2.7.2 II-DB-W2SW1 Daughterboard.....	16
2.8 SCHEMATICS	17
2.9 RUNNING THE iCHIPCONFIG UTILITY	18
2.10 CONFIGURING FOR CONNECTION	19
2.10.1 Dynamic IP Allocation.....	20
2.10.2 Fixed IP Configuration.....	21
2.11 TESTING THE CONNECTION.....	21
3 FIRMWARE AND PARAMETERS UPDATE	23
3.1 LOCAL FIRMWARE UPDATE.....	23
3.1.1 First-Time Firmware Installation Using Monitor Mode	23
3.1.2 Updating Existing Firmware Using the iChip Uploader.....	27
3.2 MANAGING PARAMETER FILES	30
3.2.1 Saving the II-EVB-630W Configuration to an RPF File	30
3.2.2 Loading an RPF File.....	31

1 Product Overview

Connect One's II-EVB-630W offloads IP connectivity tasks from a host processor or device. II-EVB-630W supports effortless integration of many upper-layer Internet protocols using either AT+i™ commands or the iChipConfig Utility, both of which are described in this document.

II-EVB-630W features include the ability to stream data over TCP or UDP sockets (up to 10 simultaneous active sockets are available) and manage two listening sockets. A secure socket (SSL3/TLS1) is fully supported. Additional features include the ability to send and receive emails with or without attachments, a built-in web server with two internal websites, one for remote control and management of the II-EVB-630W and the other for the device; HTTP, FTP, and Telnet clients; and the SerialNET™ (Device Server) mode, a plug-and-play operating mode that enables the connection of any device with an RS232 interface to the Internet without changing anything on the device's hardware or software.

1.1 iChip CO2128SEC — The II-EVB-630W Internet Engine

The host processor communicates with the II-EVB-630W via Connect One's high-level AT+i command set. AT+i commands are simple ASCII characters that are sent across the RS232 interface. The AT+i Application Programming Interface (API) requires writing just a few lines of code on the host processor to implement Internet connectivity.

AT+i commands make it very easy to configure, test, and implement high-level Internet protocols with virtually no understanding of TCP/IP or other Internet protocols. Using AT+i commands, the device only needs to tell the II-EVB-630W what task to perform, but not how to perform it. For example, if the device has to send textual email, after a one-time short configuration of subject, recipient, mail account, etc., the device sends AT+iEMA: *<lines of text>*.

The iChip CO2128SEC inside the II-EVB-630W establishes a connection or uses the existing one, builds the email (headers and content), connects to the SMTP server and sends the email. A status report is sent to the device upon completion. All these actions are completely hidden from the device and only require sending a few characters in addition to the email content. This mode of operation is applicable for all features of the II-EVB-630W.

1.2 How to Use this Manual

iChipConfig Utility is a front-end Windows-based user interface for the AT+i commands. The iChipConfig Utility, combined with the II-EVB-630W, enables quick and full product configuration, serial-based and Web-based updating of firmware, and packaging of a website and parameters file. This functionality is achieved from any device, machine, or system.

Note: From this point onward, this manual assumes that you have the iChipConfig Utility installed. The configuration, running, and testing of the II-EVB-630W is demonstrated via the iChipConfig Utility, although they can also be carried out using AT+i commands. For a complete description of the AT+i interface and commands, refer to the *AT+i Programmer's Manual* on Connect One's website: <http://www.connectone.com>.

To set up the iChipConfig Utility, refer to the *iChipConfig Utility User Manual*.

The latest version of the iChipConfig Utility can also be found on Connect One's website: <http://www.connectone.com>.

A reference design for using iChip CO2128SEC with a built-in MAC and external PHY (Davicom DM9161A) and WiFi using Marvell 88W8686 802.11b/g chipset can be found at <http://www.connectone.com>.

2 Getting Started

This section describes the contents of the II-EVB-630W package, provides additional relevant documentation to enhance and fine-tune the II-EVB-630W functionality, and includes unpacking and first-time configuration instructions. The final section of this chapter offers several ways to test the II-EVB-630W LAN connection.

2.1 What's in the Package?

The II-EVB-630W is a turnkey boxed solution and, as such, is supplied with all necessary accessories. The package includes the following items:

- II-EVB-600W motherboard
- WiFi 802.11b/g daughterboard (BRD-IIDB-W2SW1)
- RS232 male/female cable
- RJ45 Cat 5 100BaseT cable
- RJ11 Phone Cable
- USB A to B Cable
- 110V or 220V power supply
- Two extra iChips CO2128SEC

2.2 Additional Documentation

The II-EVB-630W is built around the iChip CO2128SEC. Great flexibility in configuration and operation of this product can be achieved via proper use of the AT+i commands.

The release package includes documentation about the AT+i Protocol, including the *AT+i Programmer's Manual*.

For the sake of simplicity, the II-EVB-630W configuration and operation is described in this document mainly through the iChipConfig Utility.

The release package contains the iChipConfig Utility and the *iChipConfig Utility User Manual*.

Note: Because documentation, utilities and firmware files change from time to time, be sure to check for the latest version on Connect One's website:
<http://www.connectone.com>.

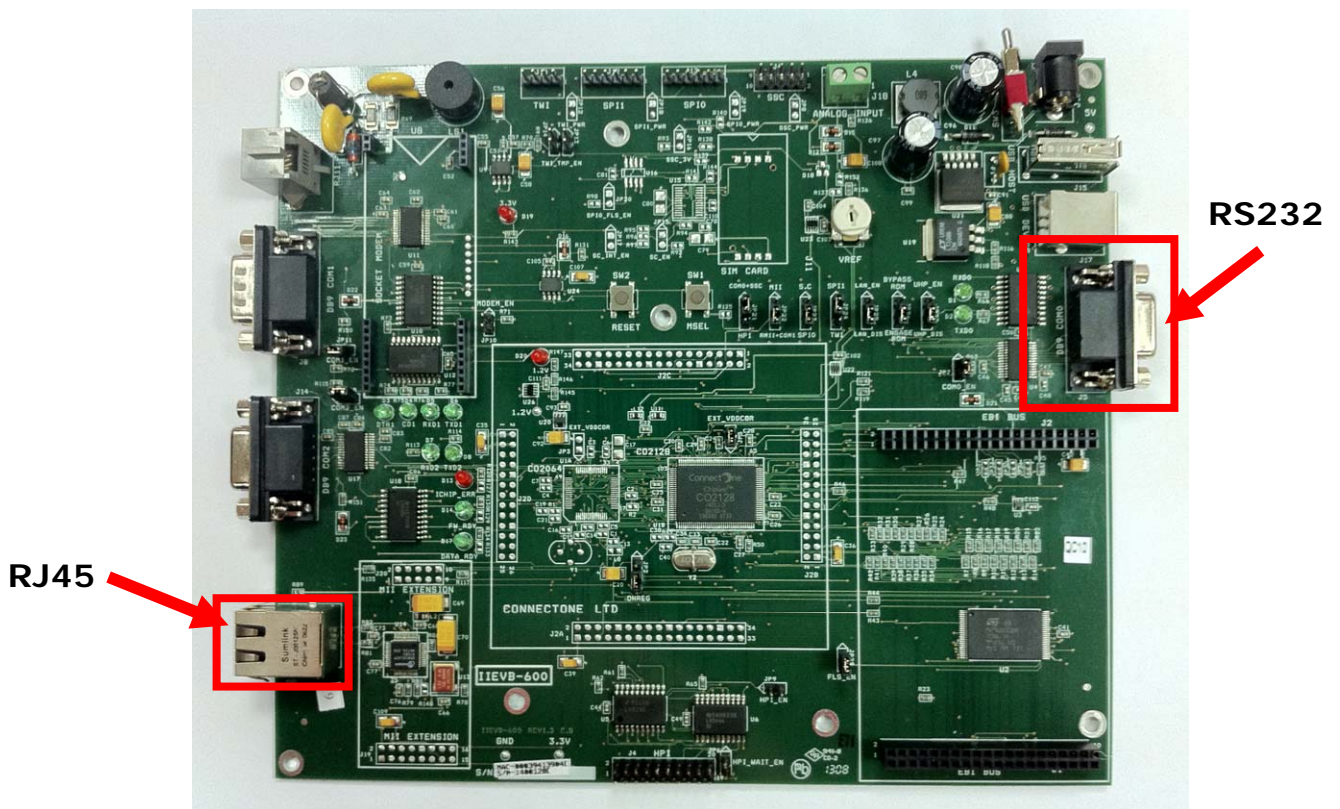
2.3 Unpacking and Installing

The II-EVB-630W installation is simple and all the required accessories are supplied with the device.

The II-EVB-630W is provided pre-configured to work with either LAN or WiFi using COM0 on the II-EVB-630W as host interface. For additional configuration options check section [2.5 Jumper Settings](#).

To install the II-EVB-630W and connect it to a LAN network:

- 1 Connect the RJ45 cable to the II-EVB-630W RJ45 port as shown in the figure below. Connect the other end of the cable to a 10/100BaseT or 100BaseT Ethernet switch or hub.



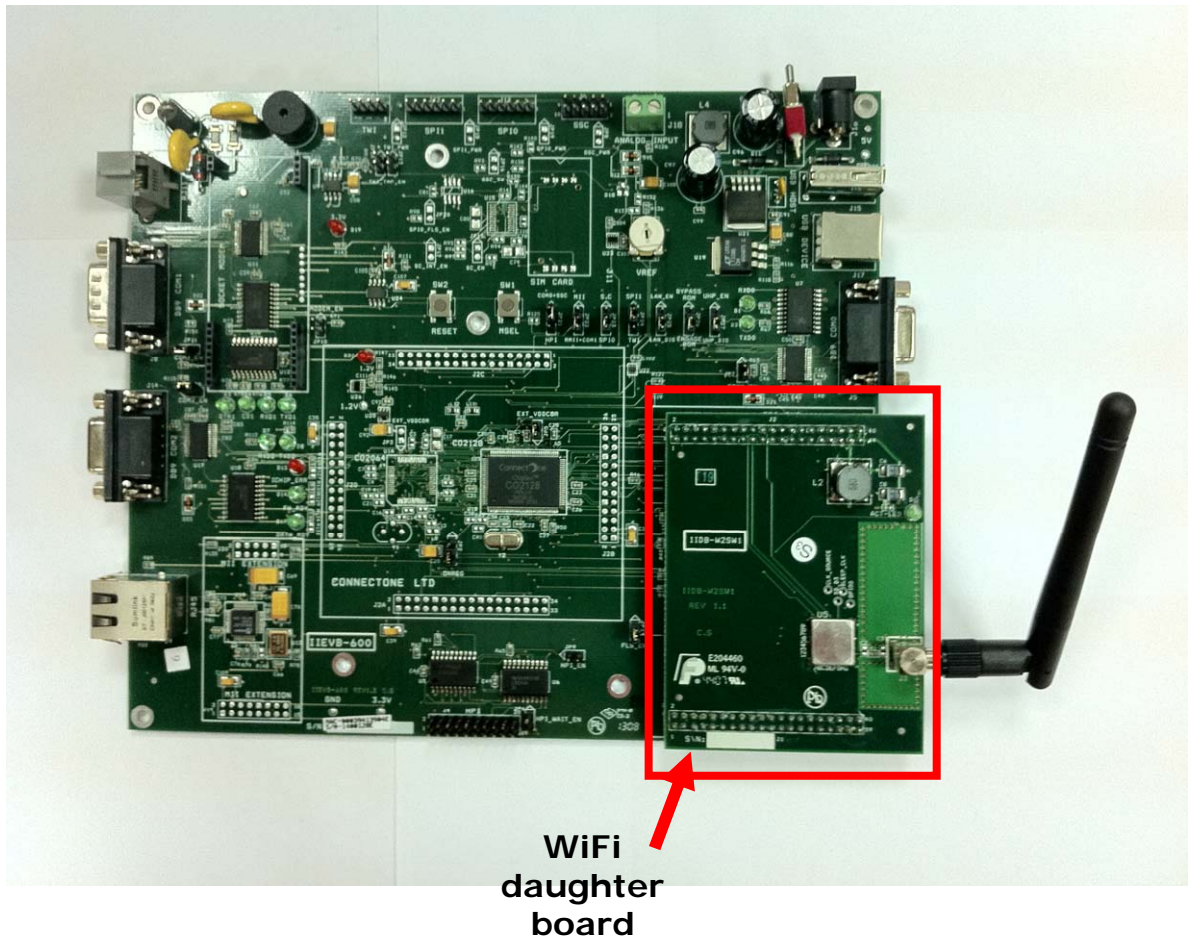
Note: To connect the II-EVB-630W directly to a PC Ethernet controller, a cross or regular cable maybe required (not supplied) depending on your NIC card.

- 2 Connect the RS232 male side of the cable to the II-EVB-630W RS232 port and the female side to your device or PC's COM port.
- 3 Connect the power supply to the DC jack on the II-EVB-630W and apply power.

The Link LED (yellow) on the RJ45 should now be on and the Activity LED (green) should blink occasionally, indicating network traffic.

To install the II-EVB-630W and connect it to a WiFi Network:

1. Make sure a WiFi 802.11b/g Access Point is properly configured and powered.
2. Connect the RS232 male side of the cable to the II-EVB-630W RS232 port and the female side to your device or PC's COM port.



3. Connect the power supply to the DC jack on the II-EVB-630W and apply power.

2.4 Connectors and Switch Positions

2.4.1 Connectors

	Name	Type	Function
1	J1	HEADER 20X2	EBI BUS
2	J2	HEADER 20X2	EBI BUS
3	J4	HEADER 10X2	HPI *
4	J5	DB9 – FEMALE	COM0
5	J6	HEADER 5X2	SSC*
6	J7	RJ11	Telephone Line (from UART1)
7	J8	DB9 –MALE	COM1
8	J9	RJ45	10/100BaseT
9	J10	HEADER 4X1	TWI
10	J12	HEADER 6X1	SPI1
11	J13	HEADER 6X1	SPIO
12	J14	DB9 – FEMALE	COM2
13	J15	USB-A	USB Host
14	J16	DC-JACK	POWER Supply
15	J17	USB-B	USB Device
16	J18	BLOCK 2 Pin	Analog Input
17	Socket Modem	4 connectors 2mm pitch	Analog modem

2.4.2 Switches

	Name	Type	Function
1	SW1	PUSH BOTTOM	MSEL
2	SW2	PUSH BOTTOM	RESET
3	SW3	TOGGLE SWITCH	POWER On/Off

2.5 LED Positions

	Name	Type	Function
1	D1	G.LED	RXD0

2	D2	G.LED	TXD0
3	D3	G.LED	DTR1
4	D4	G.LED	CD1
5	D5	G.LED	RXD1
6	D6	G.LED	TXD1
7	D7	G.LED	RXD2
8	D8	G.LED	TXD2
9	D13	R.LED	iChip Error
10	D14	G.LED	FW_RDY
11	D17	G.LED	DATA READY
12	D19	R.LED	3.3V VDDIO
13	D20	R.LED	1.2V External

2.6 Jumper Settings

	Name	Setting
1	JP2	1-2 ONREG Pin=0 working with external VDD core ; 2-3 ONREG Pin=1 working with internal VDD core
3	JP5	ON –External VDDCore
4	JP6	ON- Enable 1K Pull-up Resistor On HPI_nWAIT signal *
5	JP7	ON- Enable COM0 (only when HPI is disabled)
7	JP9	ON- Enable HPI *
8	JP10	ON- Enable Socket Modem (on UART1)
9	JP11	ON- Enable COM1
11	JP13	ON- Enable 1K Pull-up Resistor On TWI_TWD signal.
12	JP14	ON- Enable 1K Pull-up Resistor On TWI_TWCK signal.
19	JP21	1-2 = COM0+SSC ; 2-3 = HPI
20	JP22	1-2 = MII ; 2-3 = RMII+COM1
21	JP23	1-2 = S.C ; 2-3 = SPI0
22	JP24	1-2 = SPI1 ; 2-3 = TWI
23	JP25	1-2 = LAN_EN ; 2-3 = LAN_DIS;
24	JP26	1-2 = BYPASS ROM ; 2-3 = ENGAGE ROM
25	JP27	1-2 = UHP_EN ; 2-3 = UHP_DIS
26	JP28	ON – COM2 Enable COM2_EN
27	JP29	ON – Enable Parallel Flash

2.7 Bill of Materials

2.7.1 II-EVB-2128-PLC Motherboard

Quantity	Reference	Part
46	C18,C22,C23,C24,C25,C26,C27,C28,C29,C30,C31,C32,C37,C41,C43,C44,C49,C50,C51,C52,C55,C57,C59,C60,C65,C66,C67,C68,C71,C72,C73,C74,C75,C76,C77,C82,C86,C91,C98,C99,C102,C103,C105,C106,C111,C112	100NF
2	C33,C34	22PF
8	C20,C42,C56,C58,C88,C92,C108,C113	10UF/16V
5	C35,C36,C39,C107,C109	1UF/16V
13	C45,C46,C47,C48,C61,C62,C63,C64,C83,C84,C85,C87,C93	470NF
2	C53,C54	1NF/3KV
2	C69,C70	100UF/16V
3	C94,C95,C104	47PF
2	C96,C97	1000UF/25V
2	C100,C101	15PF
10	D1,D2,D3,D4,D5,D6,D7,D8,D14,D17	G.LED
1	D10	1N4001
1	D11	MUR115
6	D12,D15,D16,D21,D22,D23	LL4148
3	D13,D19,D20	R.LED
1	F1	RXE020
8	JP2,JP21,JP22,JP23,JP24,JP25,JP26,JP27	JMP3
10	JP5,JP6,JP7,JP9,JP10,JP11,JP13,JP14,JP28,JP29	JUMPER
2	J1,J2	HEADER 20X2 FEM
1	J4	HEADER 10x2
2	J5,J14	DB9 FEM
1	J6	HEADER 5X2 MALE
1	J7	RJ11
1	J8	DB9 MALE
1	J9	ERNI
1	J10	CON4
2	J12,J13	CON6
1	J15	USB-A
1	J16	DC-JACK

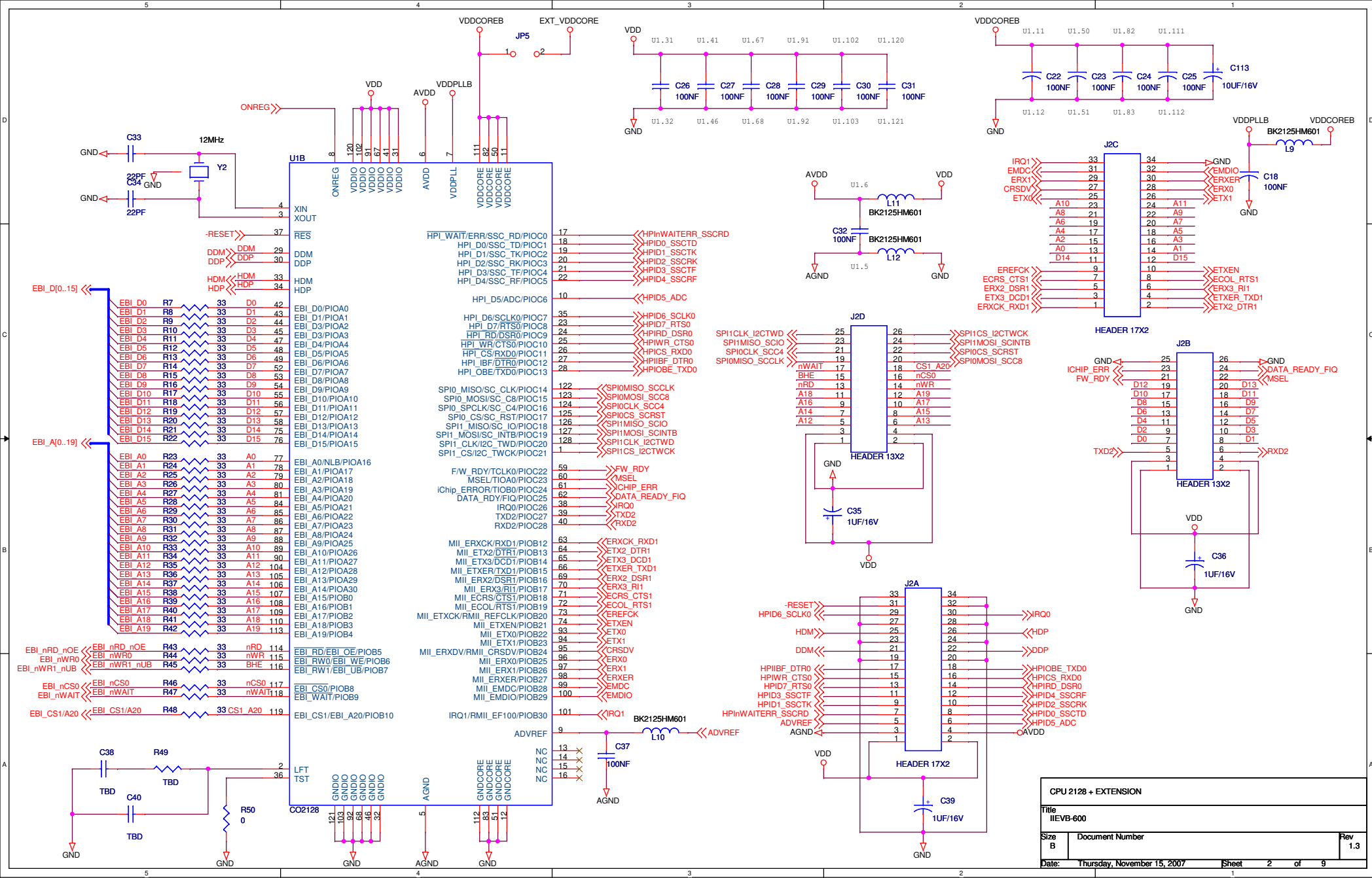
1	J17	USB-B
1	J18	CON2
1	LS1	HPE1206
1	L1	2961666681
5	L2,L9,L10,L11,L12	BK2125HM601
1	L4	68UH/1A
1	P1	POT
10	R62,R65,R78,R79,R80,R90,R91, R145,R146,R151	10K
1	RV1	DSS-301L
9	R50,R85,R87,R136,R149,JP30, JP31,JP32,JP33	0
42	R7,R8,R9,R10,R11,R12,R13,R14, R15,R16,R17,R18,R19,R20,R21, R22,R23,R24,R25,R26,R27,R28, R29,R30,R31,R32,R33,R34,R35, R36,R37,R38,R39,R40,R41,R42, R43,R44,R45,R46,R47,R48	33
16	R51,R53,R54,R55,R56,R57,R58, R59,R60,R61,R63,R71,R72,R73, R115,R150	100K
15	R66,R67,R74,R75,R76,R77,R88, R89,R113,R114,R128,R130, R134,R143,R147	470
2	R68,R69	2Ω
1	R70	10
4	R81,R82,R83,R84	49.9 1%
1	R86	6.8K1%
9	R106,R107,R108,R109,R110, R111,R112,R117,R135	3K
1	R116	100
1	R118	300
4	R119,R121,R123,R124	27
3	R120,R122,R126	15K
1	R131	4.7K
2	SW1,SW2	TACK_SW
1	SW3	SWITCH ON/OFF
1	U1B	CO2128
1	U2	29LV160BT-70EC
1	U3	NC7S04
3	U4,U11,U17	SP3243ECA
1	U5	74HCT245
2	U6,U10	74LV244
3	U7,U12,U18	74LVX240M
1	U8	Socket For Modem
1	U9	LM386
1	U13	F4100-50MHZ
1	U14	DM9161A

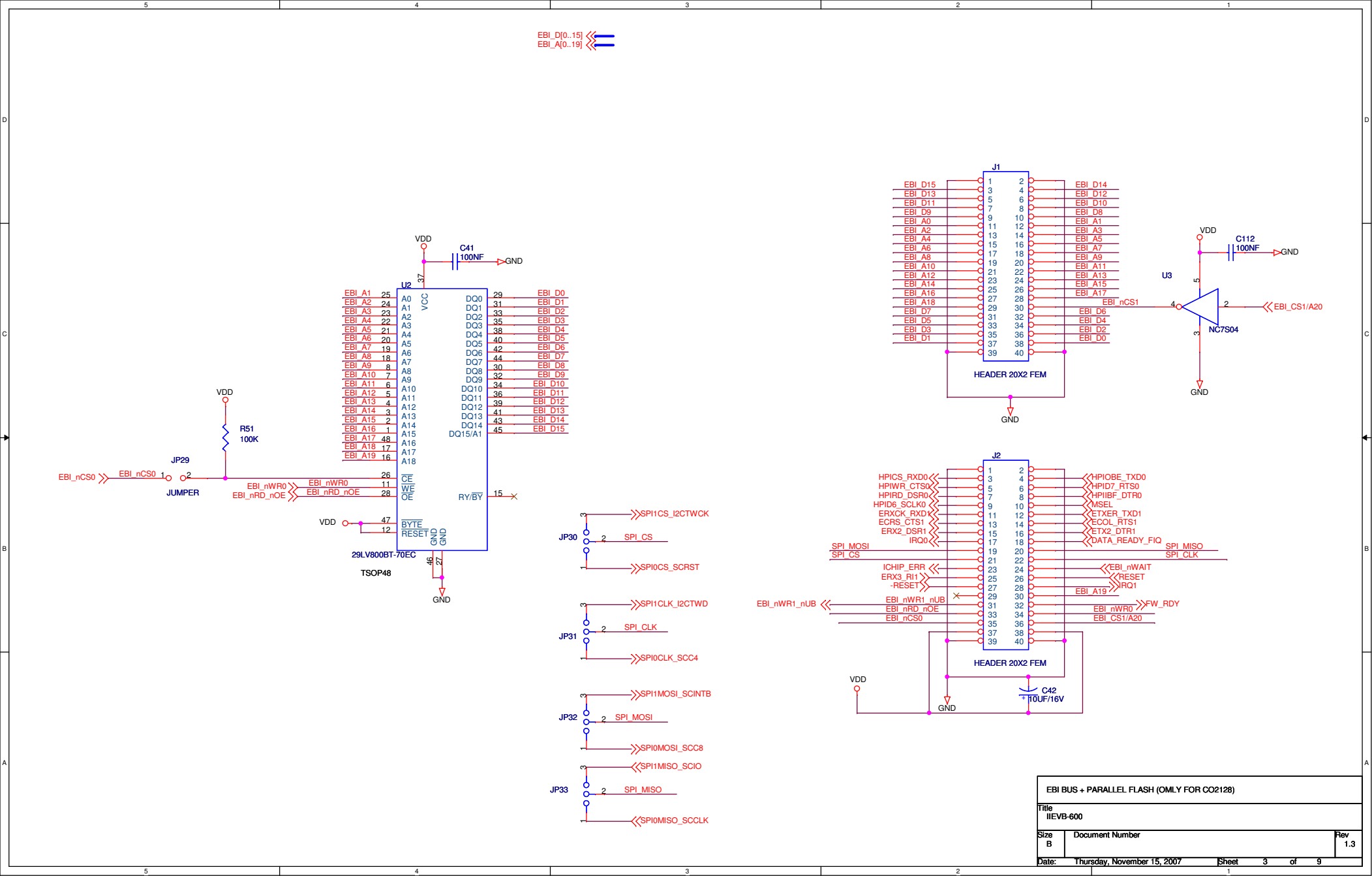
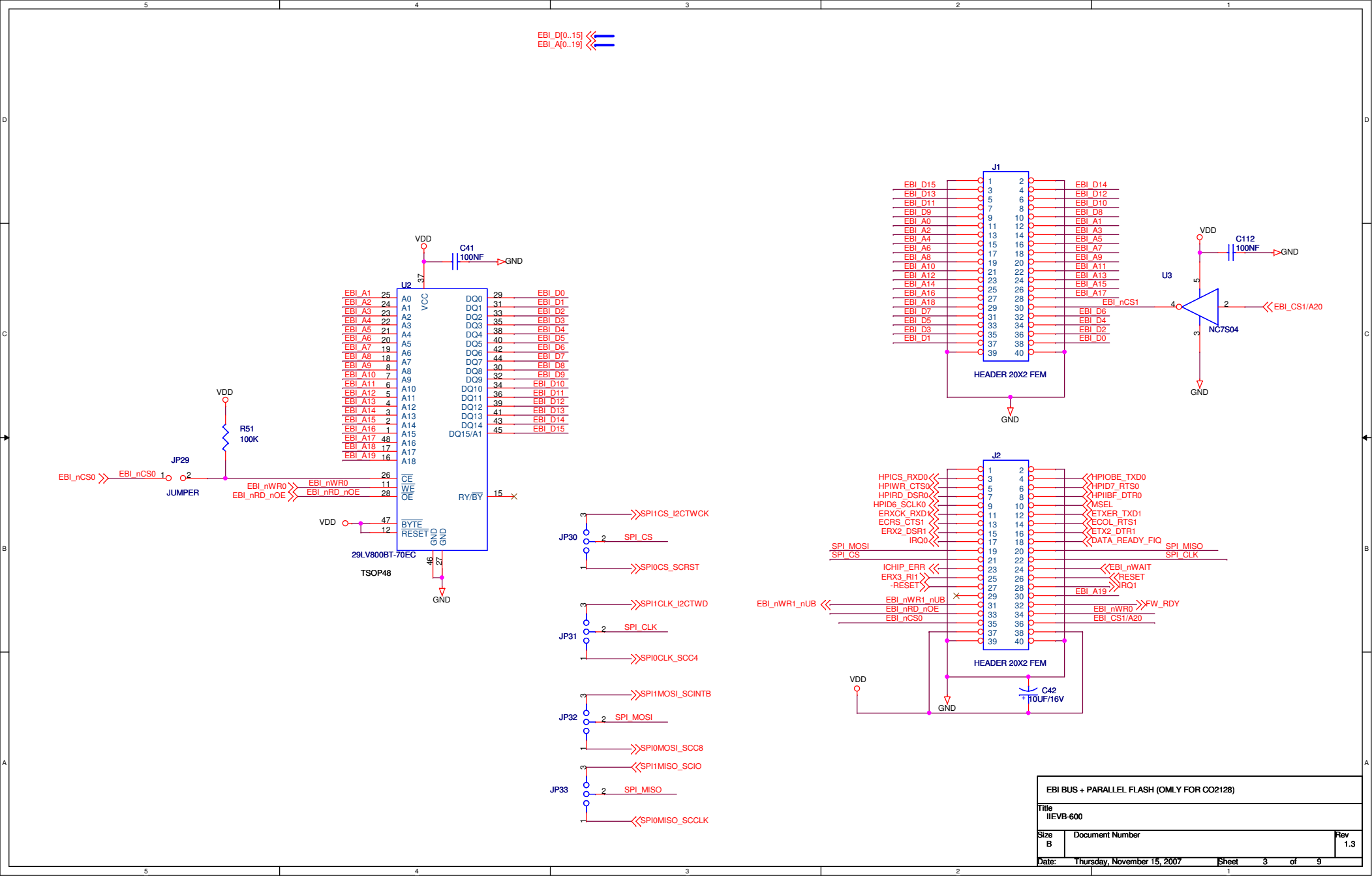
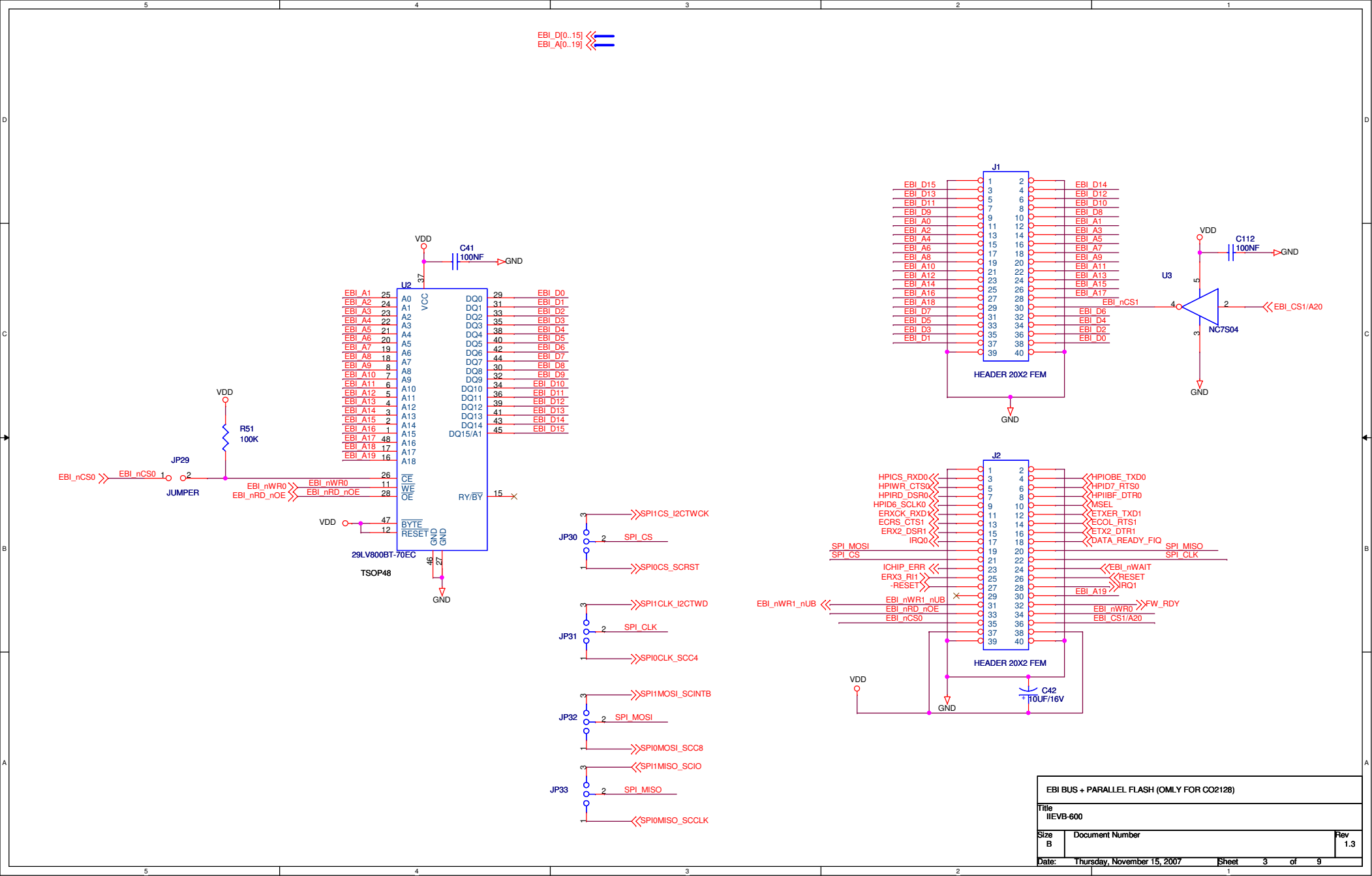
1	U19	LT1086CM
1	U20	TPS76912
1	U21	LM2591HVS-3.3
1	U22	TS5A3159
2	U23,U26	AD8030
1	U24	SP708RCN
1	U27	LM75A
1	Y2	12MHZ

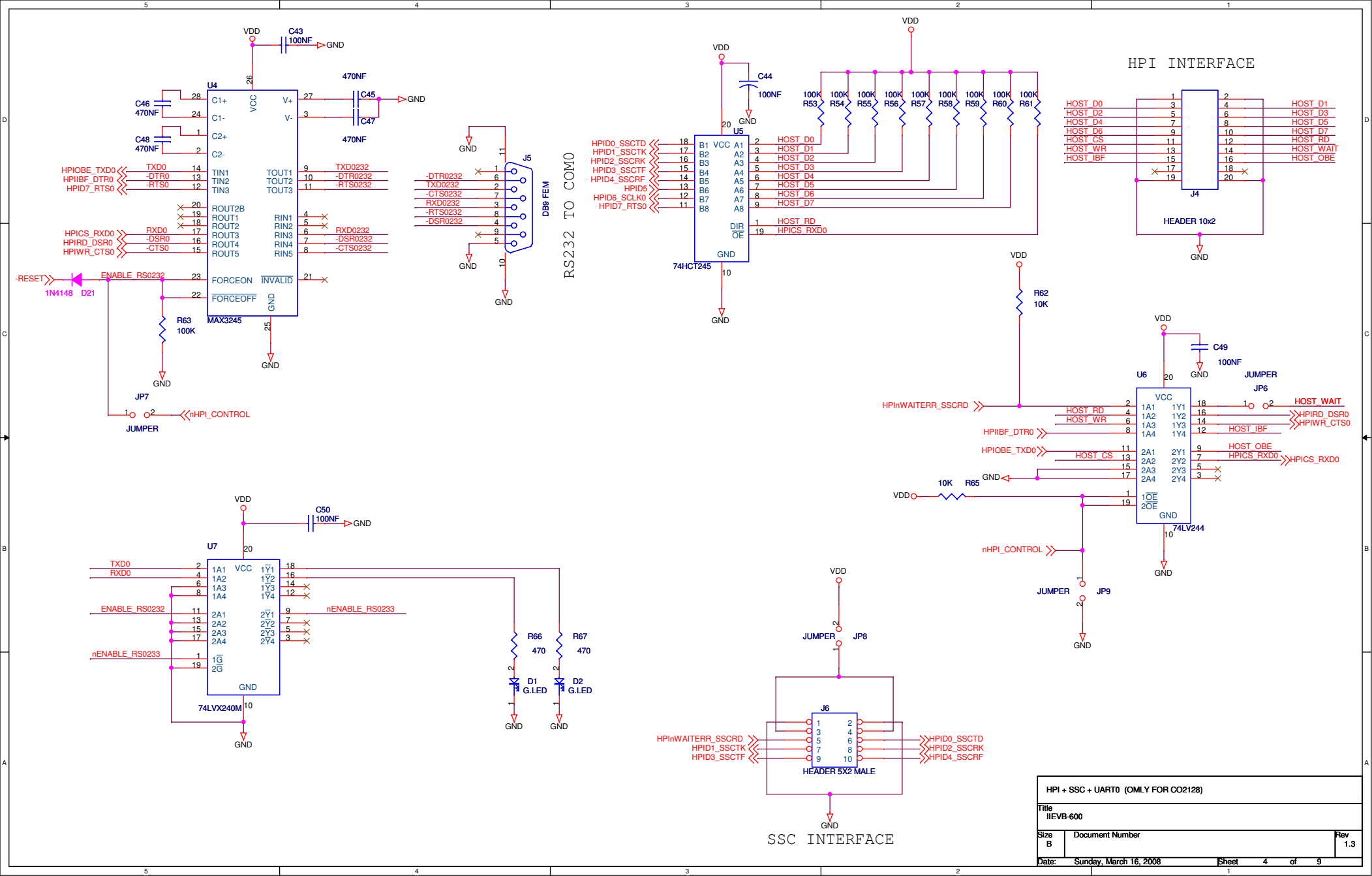
2.7.2 II-DB-W2SW1 Daughterboard

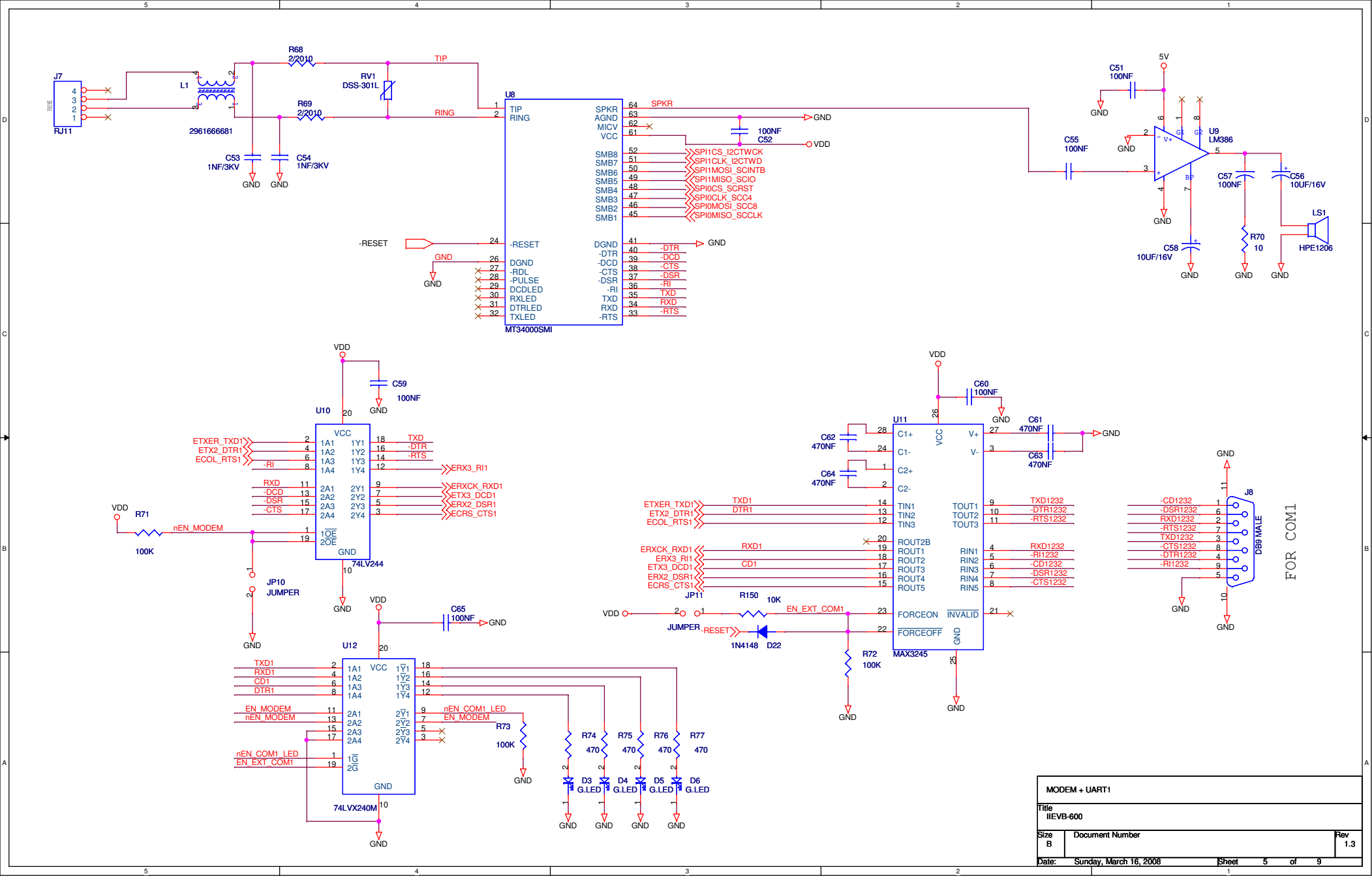
Quantity	Reference	Part
2	C6,C8	100UF/6.3V
5	C9,C11,C14,C15,C16	100NF
2	C10,C13	1NF
1	D1	G.LED
2	J1,J2	HEADER 20X2 MALE
1	J3	SMA
1	L2	68UH/1A
1	R1	0
1	R3	330
4	R6,R7,R9,R10	100K
1	R11	N.C
1	U5	W2SW0001

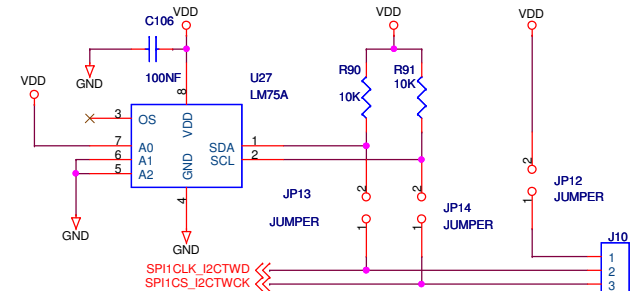
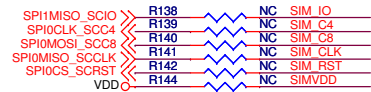
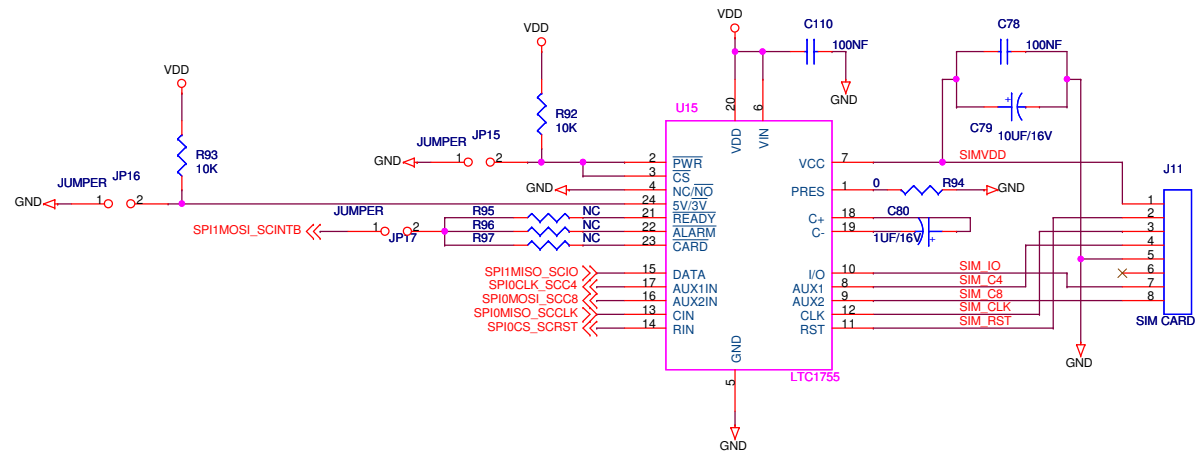
2.8 Schematics



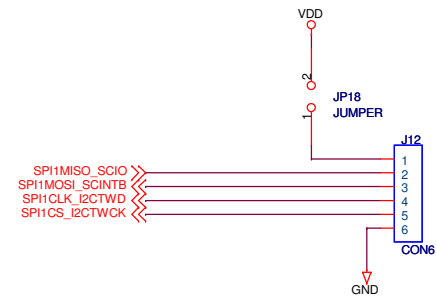




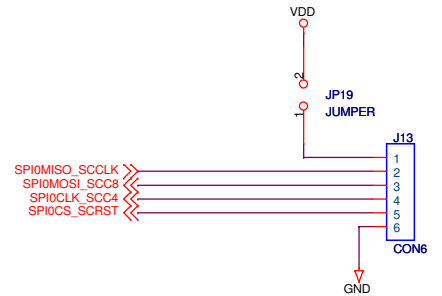




TWI INTERFACE

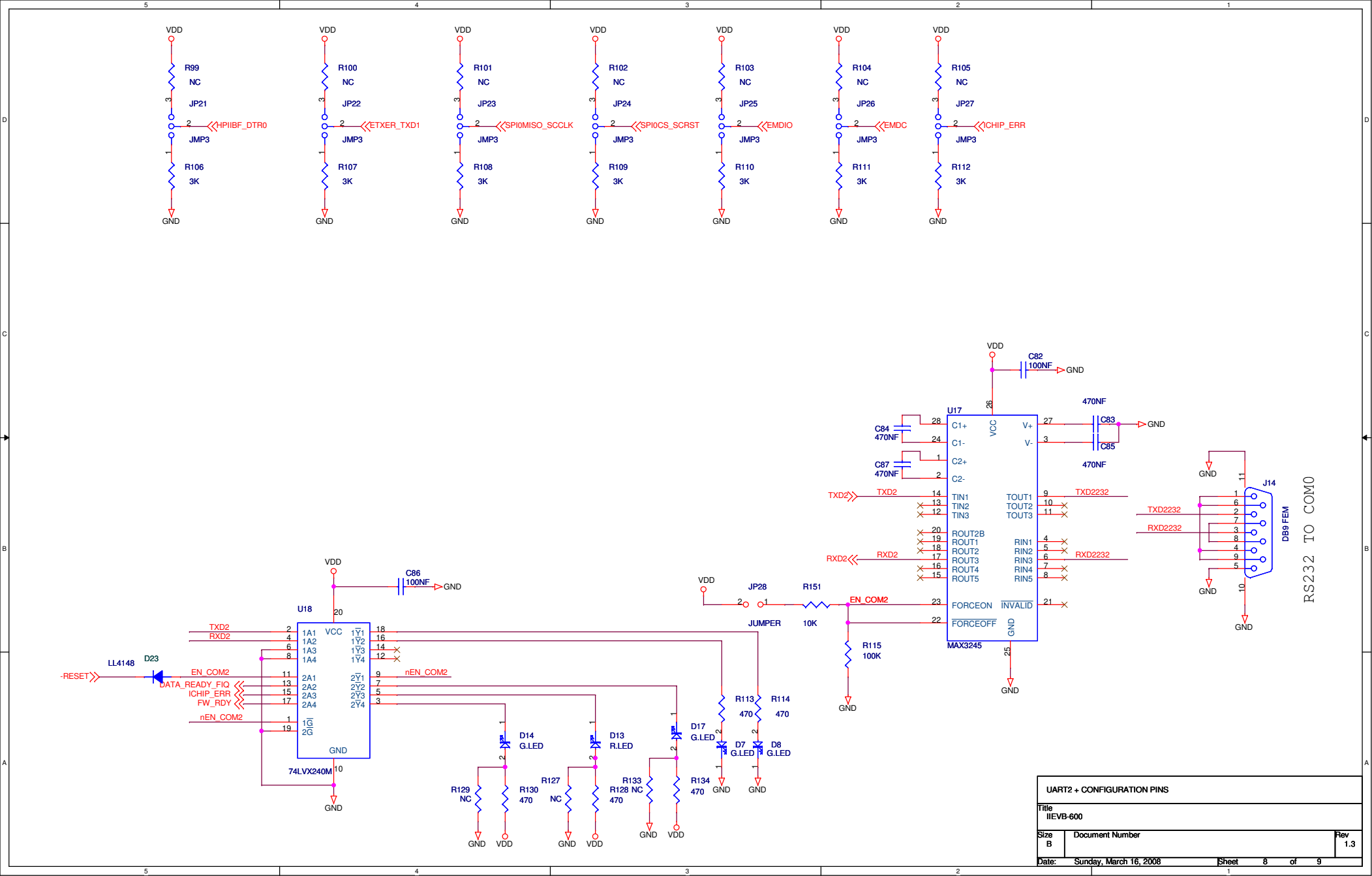


SPI1 INTERFACE



SPI0 INTERFACE

SPI FLASH + SPI1 + TWI + SIM INTERFACE			
Title			
IIEVB-600			
Size	Document Number		
B			
Date:	Sunday, March 16, 2008		
Sheet	7	of	9
Rev	1.3		

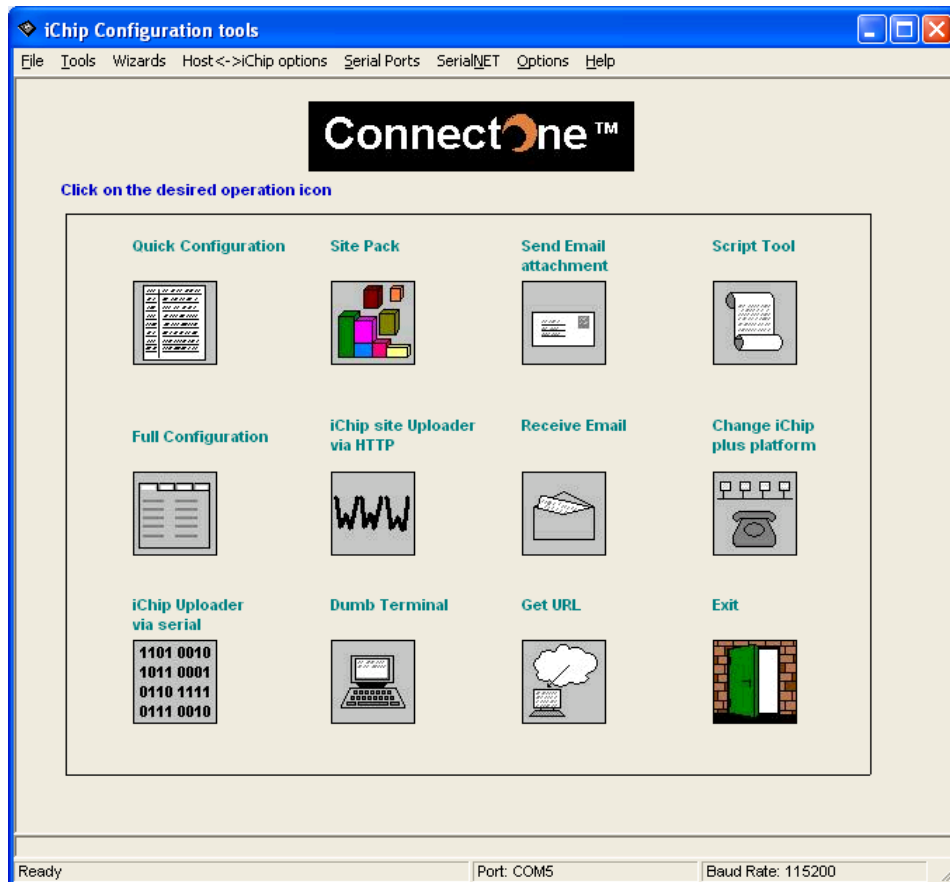


UART2 + CONFIGURATION PINS		
Title IIEVB-600		
Size B	Document Number	Rev 1.3
Date: Sunday, March 16, 2008	Sheet 8	of 9

2.9 Running the iChipConfig Utility

To invoke the iChipConfig Utility:

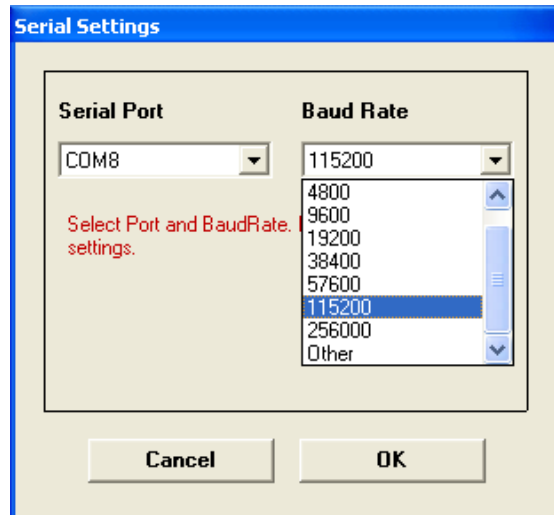
- 1 Select **Programs > ConnectOne > iChipConfig** from the Windows **Start** menu. The *iChip Configuration Tools* window is displayed:



- 2 Select the desired operation by clicking the appropriate icon.

When an icon is selected (except **Exit**), the iChipConfig utility attempts to locate the II-EVB-630W on one of the PC's COM ports.

If the II-EVB-630W is not located, the *Serial Settings* dialog box is displayed:



This dialog box is also displayed if you select **Serial Ports** from the menu bar.

- 3 From the **Serial Port** drop-down list, select the PC COM port to which the II-EVB-630W is connected.
- 4 In the *Baud Rate* area:
 - Select the exact **Baud Rate** used by the II-EVB-630W.
 - or-
 - Select **Scan** if you don't know the baud rate.

If **Scan** is selected, the iChipConfig Utility runs through the various baud rates until the correct baud rate is found. The following message is displayed:



Note: If the iChipConfig Utility still fails to find the II-EVB-630W, make sure that there is no open application, such as Palm HotSync, occupying the port. Switch to a different COM port and try **Scan** again. After iChipConfig has found the baud rate, you can easily change it using the **Serial Settings** dialog box.

2.10 Configuring for Connection

To connect on the LAN side, the II-EVB-630W needs basic LAN settings, such as IP Address, Subnet, and Gateway IP address. There are two ways to configure this set of parameters:

- *Dynamic IP Allocation* (Via DHCP).
- *Fixed IP Configuration* (Via User Assignment).

2.10.1 Dynamic IP Allocation

By default, the II-EVB-630W is configured to gain LAN access via a DHCP server. Therefore, if a DHCP server is present, there is no need for additional configuration.

Default settings can be restored using the **AT+iFD** command, which you can issue in the *Dumb Terminal* window. **AT+iFD** will revert all parameters to factory defaults.

- 1 Specific configuration for acquiring LAN settings via DHCP can be carried out from the *Quick Configuration* window in the figure below:

The screenshot shows the 'iChip plus Quick Configure' window. It has a menu bar with 'File' and a toolbar with standard window controls. The main area is divided into several sections:

- ConnectOne™** logo at the top center.
- iChip parameters** section:
 - ISP Telephone number: text input field.
 - User name: text input field.
 - Password: text input field.
 - ☐ Blind dial checkbox.
- iChip LAN parameters** section:
 - Default IP address: four digit input fields (0, 0, 0, 0).
 - Assigned IP address: text input field (0.0.0.0).
 - Sub Net: four digit input fields (0, 0, 0, 0).
 - MAC address: text input field (FFFFFFFFFFFF).
 - Gateway: four digit input fields (0, 0, 0, 0).
 - ☐ Use DHCP checkbox.
 - ☐ Use IP Finder checkbox.
- General parameters** section:
 - SMTP Server: text input field.
 - Destination email address: text input field.
 - Return email address: text input field.
 - POP3 Server: text input field.
 - Mailbox: text input field.
 - Mailbox password: text input field.
 - DNS1: four digit input fields (0, 0, 0, 0).
 - DNS2: four digit input fields (0, 0, 0, 0).
- At the bottom, status information:
 - iChip type: CO2128-D iChip plus (LAN platform)
 - Serial num: FFFFFFFF
 - Firmware ver: ID721q01 2.12.2007
 - Boot block: 0204 6.9.2007
- Buttons: 'Save' and 'Close'.
- Bottom status bar: 'Ready', 'Port: COM5', 'Baud Rate: 115200'.

- 2 Select the **Use DHCP** checkbox and click **Save**.
- 3 To activate these settings, recycle power to the II-EVB-630W.

Note: II-EVB-630W supports DHCP Server extensions. This means that if your server's assignees have additional LAN settings, such as an SMTP server, the II-EVB-630W automatically configures and uses these settings.

2.10.2 Fixed IP Configuration

To configure the II-EVB-630W to work with a fixed IP address, the following parameters must be configured:

- 1 Use the *Quick Configuration* screen to set the following parameters:
 - **IP Address (DIP)**: Set it to the IP address you want the II-EVB-630W to have.
 - **Subnet (SNET)**
 - **IP Gateway (IPG)**
- 2 Click **Save** and recycle power to the II-EVB-630W.

These settings can also all be configured using the AT+i commands - **AT+iDIP**, **AT+iSNET** and **AT+iIPG**. Full details about these commands can be found in the *AT+i Programmer's Manual*.

2.11 Testing the Connection

The connection can be tested using any operation that causes the II-EVB-630W to send/receive information. For example, sending and receiving data over a socket, sending emails, or opening an FTP session.

One of the simplest ways to test the connection is using the web client, as it requires no additional configuration. Assuming the LAN is connected to the Internet, you can use the client on the iChipConfig Utility to run the following test:

- 1 From the **Main** menu, select the **Get URL** option.

The *iChip Configuration Tools* window is displayed:



- 2 Type the full path of the URL you want to retrieve.
- 3 Select **an existing path** for the file in order to save the URL page.
- 4 Select the **Show in browser** option to automatically open your web browser and show the contents that the II-EVB-630W retrieved.
- 5 Click **Get** to retrieve the file.

Note: If the path you enter is not a full path to an object, such as JPG, file, or HTML page, enter "/" to enable II-EVB-630W to find the default page specified for this URL.

- 6 The same option can be carried out using, for example, the following AT+i command:
AT+IRLNK:<http://www.google.com/>.

3 Firmware and Parameters Update

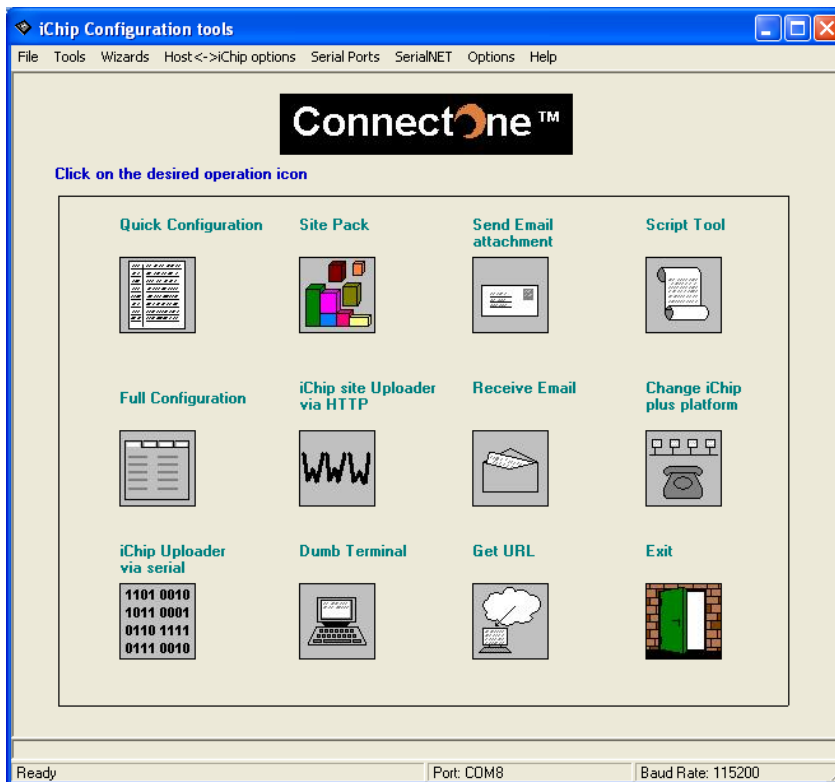
This section describes the II-EVB-630W local firmware and parameters update procedures. It also describes how to create and use parameter files (*.RPF).

3.1 Local Firmware Update

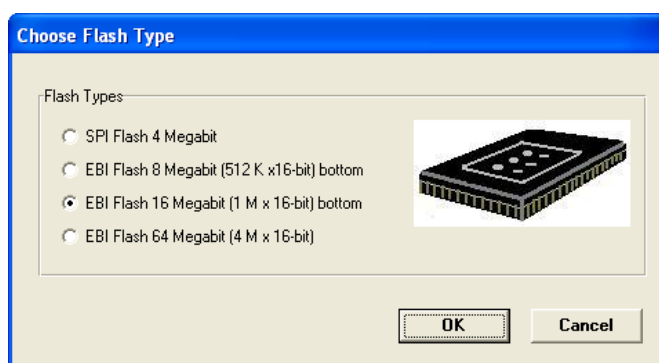
The II-EVB-630W can be updated locally via the **Tools > CO2128/2064 Monitor Mode** command, or via the iChip Uploader feature of the iChipConfig Utility. First time installation of the firmware must be done via Monitor Mode. Successive firmware updates can be performed using the iChip Uploader, which is a much faster procedure that does not require re-installation of the boot loader.

3.1.1 First-Time Firmware Installation Using Monitor Mode

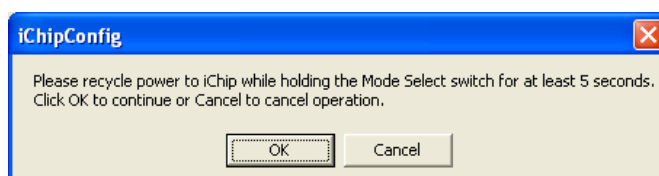
1. Open the iChipConfig utility.



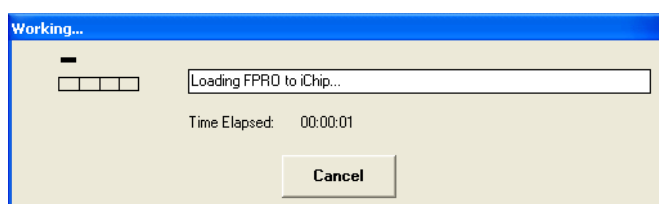
2. Click **Tools > CO2128/2064 Monitor Mode**.
3. In the dialog box displayed, select the **EBI Flash 8 Megabit** option and click **OK**.



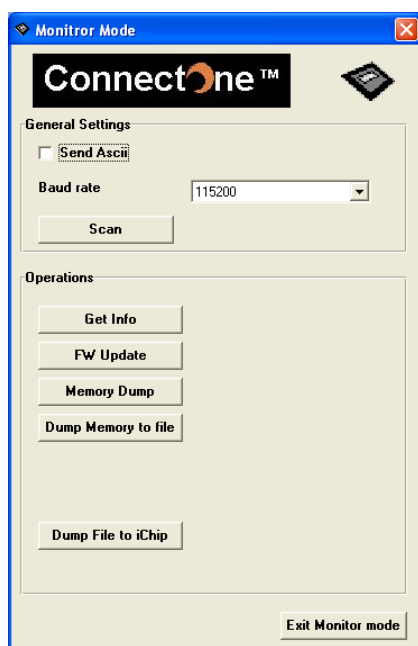
4. Recycle power to the II-EVB-630W while holding down the Mode Select (MSEL) switch for *at least* 5 seconds, and click **OK** to continue.



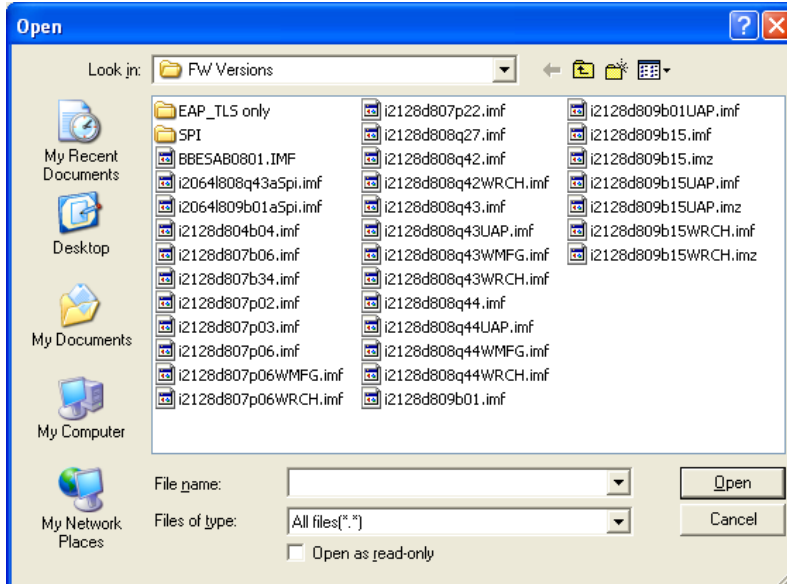
5. The following window appears while the FPRO application is installed.



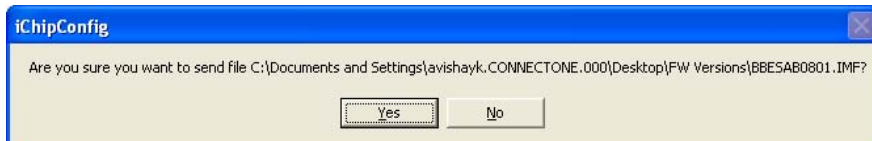
6. The Monitor Mode dialog box is displayed. Click the **FW Update** button.



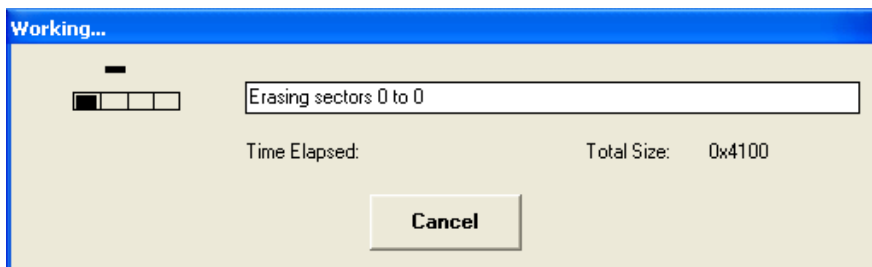
7. In the dialog box that appears, browse to the location of the Boot Block IMF file you obtained from Connect One, select the file and click **Open**.



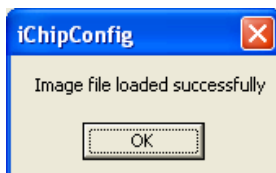
8. Click **Yes** when prompted.



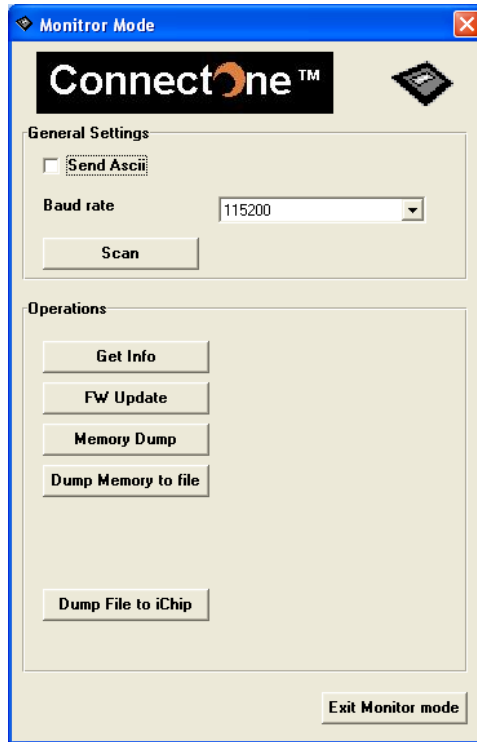
9. The following window appears while certain sectors of the flash are being erased and the boot block is being installed.



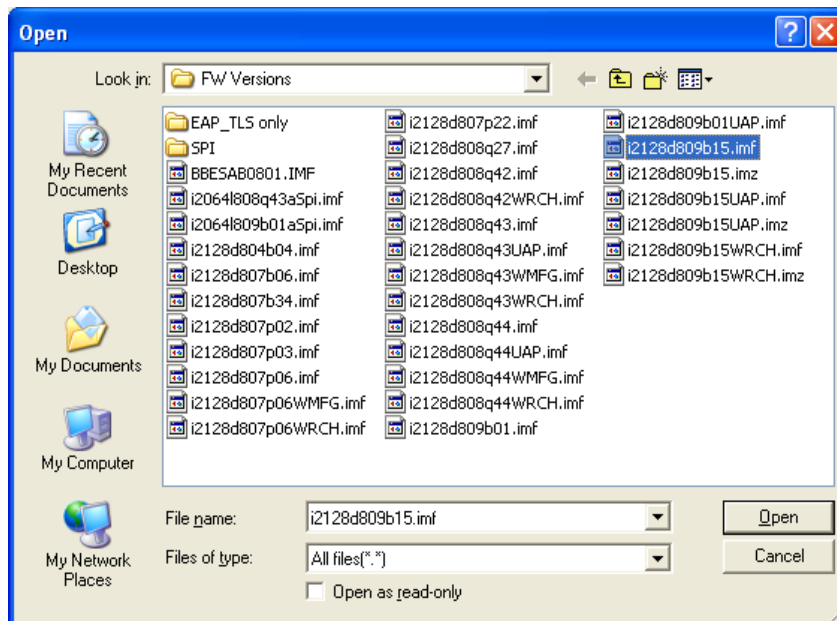
10. OK the dialog box that appears when the boot block has been installed successfully.



11. In the Monitor Mode dialog box, click the **FW Update** button again.



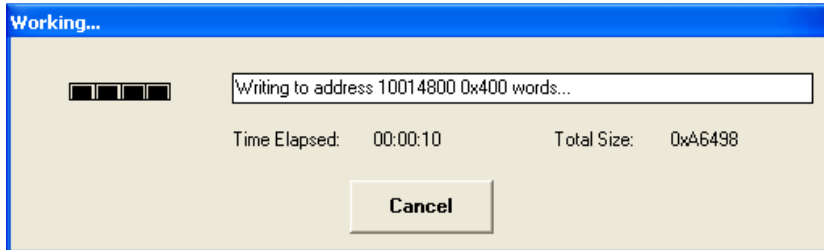
12. In the dialog box that appears, browse to the location of the firmware IMF file you obtained from Connect One, select the file and click **Open**.



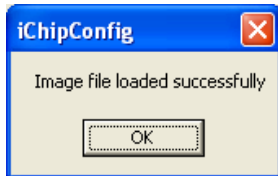
13. Click **Yes** when prompted.



14. The following window appears while the firmware is being installed on the flash.



15. OK the dialog box that appears when installation has completed successfully.

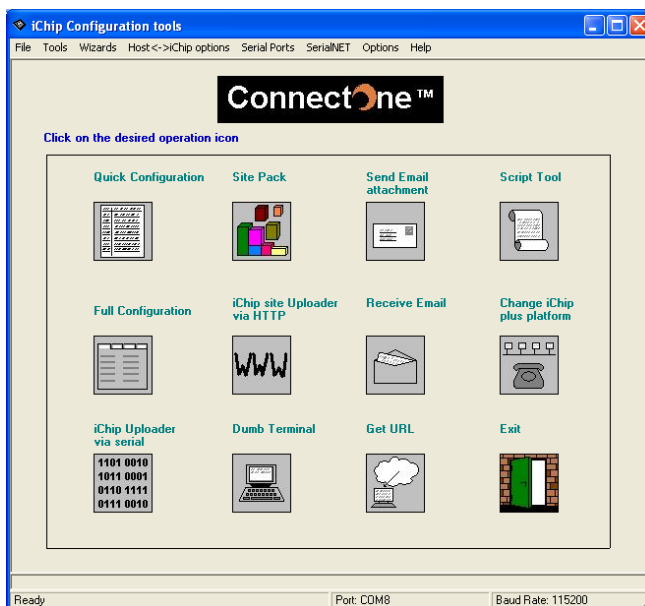


16. Click the **Exit Monitor Mode** button on the Monitor Mode window to return to command mode.

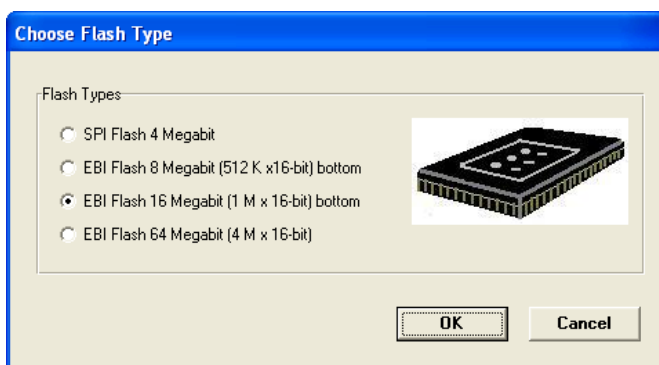
3.1.2 Updating Existing Firmware Using the iChip Uploader

Note: This procedure assumes that the SPI flash memory on the II-EVB-630W already contains a previous version of the iChip firmware.

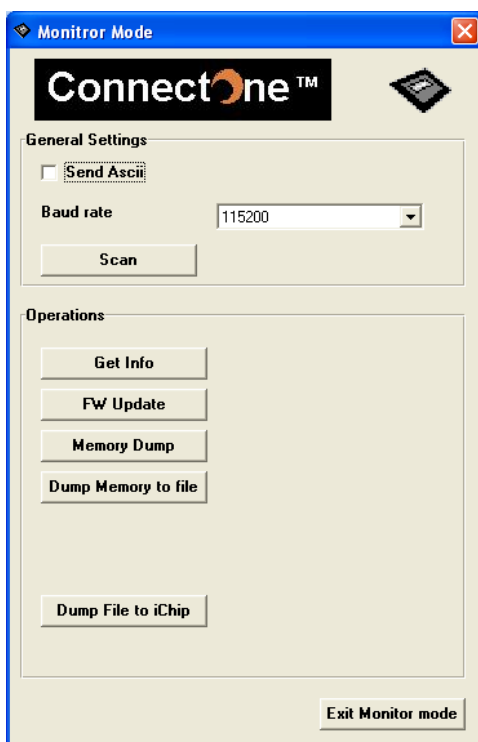
1. Open the iChipConfig utility.



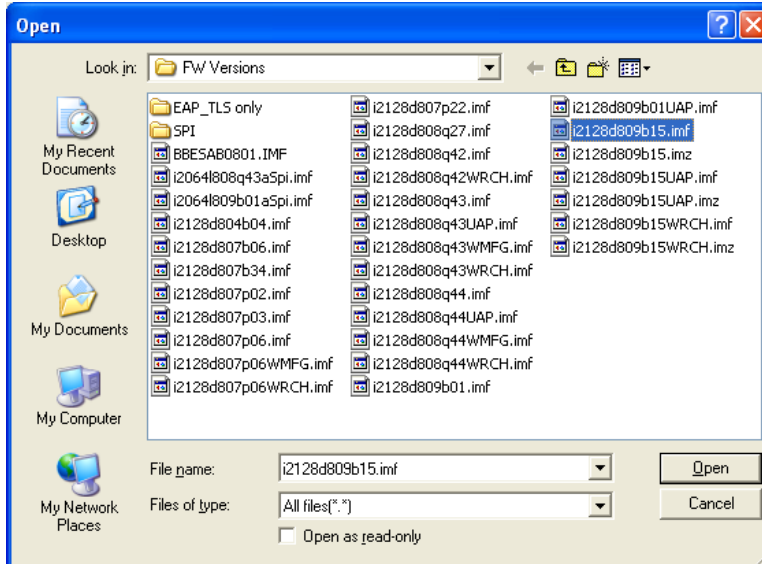
2. Click the **iChip Uploader via Serial** icon.
3. In the dialog box displayed, select the **EBI Flash 8 Megabit** option and click **OK**.



4. The Monitor Mode dialog box is displayed. Click the **FW Update** button.



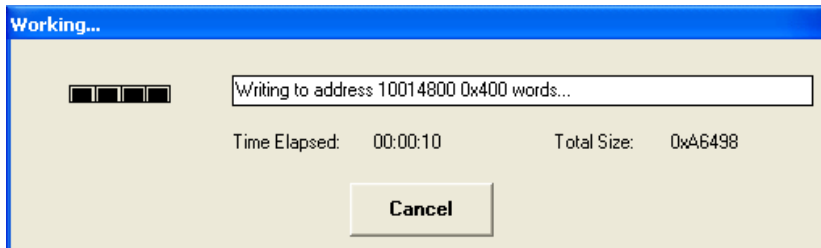
5. In the dialog box that appears, browse to the location of the firmware IMF file you obtained from Connect One, select the file and click **Open**.



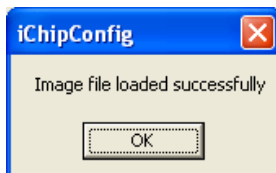
6. Click **Yes** when prompted.



7. The following window appears while the firmware is being installed on the flash.



8. OK the dialog box that appears when installation has completed successfully.



9. Click the **Exit Monitor Mode** button on the Monitor Mode window to return to command mode.

3.2 Managing Parameter Files

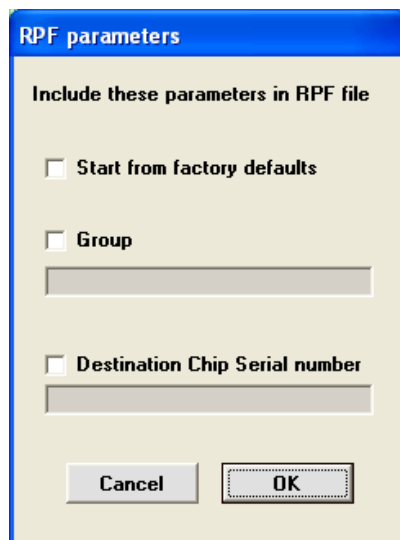
Parameters for the II-EVB-630W are stored in ***.RPF** files. Parameter files can be used to save current configurations to be loaded for later use or to automate product distribution.

3.2.1 Saving the II-EVB-630W Configuration to an RPF File

All or some of the parameters stored in the II-EVB-630W can be saved to a Remote Parameters File (RPF), or loaded from an RPF file onto the II-EVB-630W, with or without parameters configured on it.

To save the configuration to an RPF file:

- 1 Select the **Full Configuration** icon. The II-EVB-630W *Full Configuration* window is displayed.
- 2 Click **File > Save as RPF File** in the *Full Configuration* window. The *RPF Parameters* dialog box is displayed:



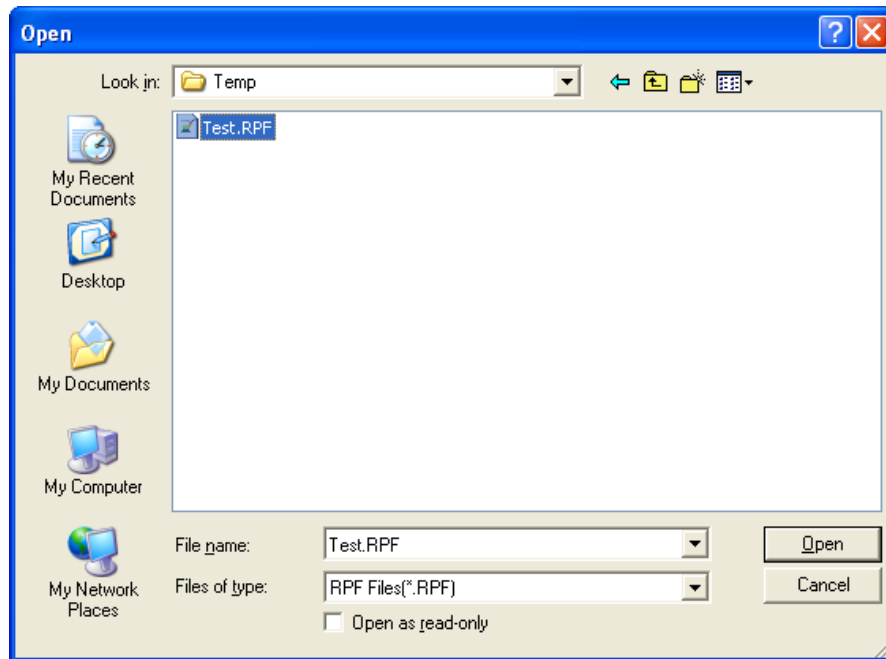
- 3 Configure the following parameters:
 - Select the **Start from factory defaults** checkbox if you want to save the factory default settings as your new parameters.
 - Do not select the **Start from factory defaults** checkbox if you want to save your current configuration except for parameters in the RPF file.
 - **Group**: Not relevant.
 - Destination Chip Serial Number: Not relevant.
 - Click **OK**.

3.2.2 Loading an RPF File

This section describes how to load an RPF file onto II-EVB-630W.

To load an RPF file:

- 1 Select **File | Load RPF file** from the **iChipConfig** menu. The *Open* dialog box is displayed:



- 2 Browse to and select the desired file.
- 3 Click **Open**. All the parameters from the RPF file are loaded onto the II-EVB-630W.
- 4 If an illegal parameter value has been assigned, the iChipConfig Utility displays the illegal parameter and suggests to save the illegal parameter to a log file.
Enter a new valid parameter value and **Load/Save** the RPF file again.